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| 10/782,837 | 02/23/2004 | Yukiko Takeda | HITA.0506 | 5428 |

7590
REED SMITH LLP
Suite 1400
3110 Fairview Park Drive
Falls Church, VA 22042

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| EXAMINER |
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KANE, CORDELIA P

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| ART UNIT | PAPER NUMBER |
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2432

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05/21/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/782,837 | Applicant(s) TAKEDA ET AL. | |
| | Examiner CORDELIA KANE | Art Unit 2432 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed April 20, 2009 have been fully considered but they are not persuasive. Applicant argues that Nikander fails to teach or suggest holding prefix allocation allow/prohibit information of a terminal device and a communications interface for rewriting allow/prohibit information. However, Nikander teaches receiving information from the mobile node that is then used to verify the address (including the prefix) of the node (pages 7-8, paragraph 141, page 2, paragraph 10). The purpose of the invention is to verify the address in a binding update to determine whether to load the care of address into the binding cache (page 1, paragraphs 5 and 6). Therefore if the address can be verified then the binding update should be loaded into the cache. The rewriting of the allow/prohibit information is after the address is verified (page 10, paragraph 232) when the address is loaded into the binding cache (page 1, paragraph 5).

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 4 – 8, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Nikander's US Publication 2002/0133607 A1. Referring to claim 1, Nikander teaches:
 - a. A processor for issuing and guaranteeing public key certification (page 3, paragraph 43).

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- b. A memory for holding prefix allocation allow/prohibit information of a terminal device, the prefix allocation allow/prohibit information indicating whether allocation of a prefix is allowed or prohibited (pages 7-8, paragraph 141).
 - c. Receiving a public key issue certification request, issuing a public key certification of said terminal device and sent to the terminal (pages 8-9, paragraph 161).
 - d. A communications interface for rewriting said prefix allocation allow/prohibit information (page 10, paragraph 232).
3. Referring to claim 4, Nikander teaches:
- e. Communicating with a server device containing a function to issue and guarantee public key certification (pages 8-9, paragraph 161) and prefix allocation allow prohibit information which indicates whether allocation of a prefix is allowed or prohibited (page 10, paragraph 232).
 - f. A transceiver for acquiring public key certification (page 9, paragraph 162).
 - g. A routine to maintain security by utilizing IPsec technology (page 1, paragraph 2), and storage to store a terminal device location information (page 4, paragraph 48).
 - h. Information confirming the identity of the terminal device is received (page 4, paragraph 48), and a public key certification is acquired (pages 8-9, paragraph 161).
4. Referring to claim 5, Nikander teaches:

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- i. An information processing device having a prefix allocation function (pages 7-8, paragraph 141).
 - j. Information confirming the identity of said terminal is received from said terminal device (page 4, paragraph 48).
 - k. An inquiry for prefix information is made to said information processing device (pages 7-8, paragraph 141).
 - l. A reply to the inquiry indicative that said prefix was allocated is made from the information processing device, then a reply confirming the identity of the terminal is sent to the terminal device (page 8, paragraph 142).
5. Referring to claim 6, Nikander teaches that the security information is compared and if it matches then there is a binding update (page 10, paragraphs 232).
6. Referring to claim 7, Nikander teaches that the prefix information is reported to the terminal device (page 4, paragraph 48).
7. Referring to claim 8, Nikander teaches:
- m. A server device that issues a public key certificate and rewrites prefix allocation information (page 3, paragraph 43, page 10, paragraph 232).
 - n. An information processor receives prefix allocation request and makes an inquiry for allow/prohibit information and allocates prefix information to said terminal device, the prefix allocation allow/prohibit information indicating whether allocation of a prefix is allowed or prohibited (pages 7-8, paragraph 141).

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- o. A terminal control device that receives information confirming the identity of the terminal device and sends prefix information to said information processor device (page 4, paragraph 48).
 - p. The information processing device establishes a security association between the terminal device and the terminal control device (page 10, paragraph 232).
8. Referring to claim 11, Nikander teaches:
- q. Said terminal device communicates with the server device holding the public key certification information (pages 8-9, paragraph 161).
 - r. Said information processing device sends prefix information to the terminal device (page 4, paragraph 48).

Claim Rejections - 35 USC § 103

9. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nikander, and further in view of Turner.
10. Nikander discloses all the limitations of the parent claim, as well as communicating with a prefix allocation function (page 4, paragraph 48). Nikander does not explicitly disclose searching the prefix allocation allow/prohibit information. However, Turner discloses searching prefix information (column 5, lines 35-36). Nikander and Turner are analogous art because they are from the same field of endeavor, routing data. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Nikander and Turner before him or her, to modify prefix

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allocation of Nikander to include the searching of Turner. The motivation for doing so would have been that the scaling issues with prefixes require a more complex lookup (column 2, lines 54-55).

11. Claims 9 and 10 rejected under 35 USC 103 (a) as being obvious over Nikander in view of Wada.

12. Nikander discloses all the limitations of the parent claim as well as:

s. That the terminal control device receives a location registration request from the terminal device, loads the security association (pages 7-8, paragraph 141)

t. That the terminal control device approves the location registration when the registration request fulfills the security association (page 8, paragraph 142)

13. Nikander does not explicitly disclose a communications device between the home and visiting network. However, Wada discloses a gateway between the home and visiting networks (Figure 15, column 27, lines 32-35). Since the prefix allocation request goes from the mobile node to the server, it inherently would go through the gateway.

14. Nikander and Wada are analogous art because they are from the same field of endeavor, mobile roaming. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Nikander and Wada before him or her, to modify Nikander to include the gateway of Wada.

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15. Claim 16 is rejected under 35 USC 103 (a) as being obvious over Akhtar in view of Nikander.

16. Akhtar discloses :

- u. Powering on a terminal (column 43, lines 25-26).
- v. Sending a router advertisement to the terminal from a visited network router (column 52, lines 4-5).
- w. Creating a care of address in the terminal (column 52, lines 16-17).
- x. Sending a device authentication request to the visited network router column 52, lines 5-6).
- y. Sending a public key certification request with a public key and a terminal ID to a calling authority (column 43, lines 48-54).
- z. Issuing a public key certification issue response from the calling authority compatible with Ipv6 (column 44, lines 20-24).
- aa. Establishing an IPsec security association and digital signature via IKE and a secure communication channel using phase I and phase II IPsec ISAKMP protocols between the terminal and the home agent server (column 18, lines 51-53).
- bb. Making a location binding update in the terminal using the IPsec security association (column 51, lines 16-18).
- cc. Thereby providing an authentication method for verifying a terminal authenticity by linking a digital signature method with a location binding update method (column 31, lines 18-27).

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17. Akhtar does not explicitly disclose sending a request to verify the public key, then allocating the prefix, and making a location binding update. However, Nikander discloses:

dd. Sending a request to check the public key certification to the calling authority (page 9, paragraph 200).

ee. Holding prefix allocation allow/prohibit information of a terminal device, the prefix allocation allow/prohibit information indicating whether allocation of a prefix is allowed or prohibited (pages 7-8, paragraph 141).

ff. Responding from the calling authority server whether prefix allocation is allowed with a prefix and creating a home address in the terminal (page 10, paragraph 232).

gg. Making a location binding update by the terminal using a binding cache from the home agent server (page 10, paragraph 232).

18. Akhtar and Nikander are analogous art because they are from the same field of endeavor, roaming of mobile nodes. At the time of the invention, it would have been obvious to one of ordinary skill in the art, having the teachings of Akhtar and Nikander before him or her, to modify Akhtar to include verifying the public key, allocating a prefix, and binding the location of Nikander. The motivation for doing so would have been to bind the interface identifier to the link layer address, and public key (page 4, paragraph 49-50).

Conclusion

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CORDELIA KANE whose telephone number is (571)272-7771. The examiner can normally be reached on Monday - Thursday 8:00 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gilberto Barron can be reached on 571-272-3799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/C. K./
Examiner, Art Unit 2432

/Gilberto Barron Jr./
Supervisory Patent Examiner, Art Unit 2432